During the week at the Summer Institute, I was exposed to a variety of really cool tools. Some required more facilitation to use them than others, which made me think a trade-show structure may have been more fitting than full 45-minute sessions; however, I definitely saw an application in the classroom for all of them. Below is a detailed outline of each tool, along with potential application, affordances and constraints.

On the first afternoon, I went to [mindmeister.com](http://mindmeister.com" \t "_blank), which is like the concept mapping feature from Smart Ideas, however, the main difference is that multiple people on their own computers can edit a mind-map at the same time. This feature facilitates collaborative knowledge generation, which is important in an inquiry-based learning model. Images can also be added along with different design features to make the map visually appealing, which is helpful for engaging adolescents. One of the affordances I saw with this mapping system is the ability to sort, group and move information around. In this way, the mind-mapping or planning process becomes very dynamic – as one’s idea(s) develops, concepts and connections can be easily re-arranged. Another affordance is the layered architecture of the map. A user can expand or contract the sub-layers, choosing when and how much information to reveal at one time. This is a helpful feature for all students, but most notably students with special needs who may feel easily overwhelmed by too much information. One frustrating element of mindmeister was how sub-categories could get bumped around on a page if a new sub-category was inserted too close to another sub-category. When I was creating my flower model lesson plan, sub-categories kept getting bumped out of the design I created. I had to periodically move all the elements back into place, which was time consuming. Barring this one constraint, I found the program very useful and will definitely use it in my future research projects with students.

Another Cool Tools session I attended was Screencast-o-matic.com where I made a screencast explaining my conference notes. This tool is similar to Jing, the only difference being that one can upload videos to YouTube and save MP4s to one’s desktop without paying for the Pro version. Another helpful feature is that it's possible to use the screencast software right from the screencast-o-matic website, instead of downloading the program to a computer. Often, school computers require an administration password to download new software, so launching the tool from the website eliminates this extra step. I can see a wide variety of uses for this tool, some of which include creating tutorials for students, explaining assignments in detail and providing oral/visual descriptive feedback on assignments, like an asynchronous one-on-one conference session. In my experience, I have found too often that students don’t take the time to read written feedback and sometimes it is easier to orally explain it. In addition to using this tool in the teaching process, I also see its application in the learning process. Students can use screencast-o-matic for peer-teaching and presentations, as teaching is often the best way to learn something. I only see one potential area of concern in using this program and that is student distraction. I’ve noticed students get easily sidetracked with image-capturing and recording tools, so I would be careful with what group of students I introduce this program.

Like screencast-o-matic, I saw the application of GoodNotes in the student assessment process as well. GoodNotes allows one to import a PDF and to make handwritten and word-processed notes on the text. Particularly helpful is the magnifying glass text box that pops out for one to write his/her notes and then re-scale the notes so they fit legibly on the page. An app like this streamlines the assignment submission process, allowing the teacher to collect, edit and return assignments from a central location. GoodNotes also allows the user to highlight text, import images, and create and insert shapes. As a result, I envision using GoodNotes with students to create scrapbooks and/or digital posters that combine words, shapes and images to convey a message. Although there are other online programs that can also do this, GoodNotes does not require an internet connection. To make a field trip more dynamic, students could take their tablets and record their experience through photos and text on the spot. Finally, the more obvious application of GoodNotes would be its use as a dynamic note-taking tool where students supplement textual notes with images from the web or diagrams made with the shapes tool. However, one action I would liked to have been able to do in GoodNotes is embed or insert hyperlinks. Embedding elements like YouTube videos or web address hyperlinks could have made the pages more dynamic and interactive. Having said this, the program is easy to use and has application in any grade level, from one to twelve and beyond.

iMap books is an online resource that allows teachers to 'gamify' books. The software allows teachers to import a text and then at certain points in the text, to insert comprehension games. The games can test for content knowledge, grammar knowledge and they can also be programmed to ask some open-ended questions within limits. This was actually one constraint I saw with iMap books. There are only a certain number of answers a teacher could conceivably program into the software. Therefore, this limits the application of the tool to the knowledge and understanding end of Bloom’s taxonomy. The software hasn't been released yet, but once it is I could certainly see myself using it to engage students, while also keeping track of their knowledge and understanding through the analytics’ feature. A teacher is able to enter the back channel and see a student’s answers to questions and the number of times a student has attempted one of the interactive games. This could provide the teacher with valuable information regarding how much content a student is absorbing and synthesizing from what they have read and learned.

Google Hangouts is an audio/visual tool like Skype, however, up to ten people can connect in a conference ‘call’ for free. The tool also allows the participants to record the session for playback at a later date. Unfortunately, a teacher would not be able to include their whole class in a conference call due to the 10-participant cap, unless the students were sharing computers. Despite this limitation, I could see myself using this tool with my students when teaching them listening and speaking skills. The tool is perfect for teaching how to have a positive, respectful and productive conversation. First, the Hangouts tool only allows one individual to appear in the main screen when s/he is speaking. If more than one person attempts to speak at a time, the program doesn’t work properly. As a result, it forces all the participants to listen to whoever has the spotlight and facilitates active listening. Second, Hangouts allows conversations to be recorded, which could be useful as a reflection tool when teaching speaking and listening skills. After participating in a discussion, a teacher could play the interaction back to the students and analyze things like body language and oral contributions: were the students making eye contact, were they facing the camera, were they articulate, did they directly respond to what was said, did they use appropriate language, did they support their points with evidence, were they respectful and why all these elements matter when engaging in a dialogue. It can be difficult to teach productive listening and speaking skills, but when a student’s behaviour is reflected back to him/her and s/he is made to analyze it, it can be a powerful exercise.

Animoto was another tool I liked, however, it left me reflecting on the value of using simple creation tools in the classroom. Animoto requires very little of the user, other than uploading/importing photos. It is restrictive in choice when it comes to the sound and design elements one can include. The instant gratification of having an aesthetically pleasing final product in minutes or even seconds is great, but I couldn’t help wondering what overall effect implementing tools like this in the classroom has. Does it enforce the program or be programmed model introduced by Rushkoff? Do students think they are actually ‘creating’ something, when the program has in fact made most, and sometimes all, of the executive design decisions that would have otherwise required deeper thought, reflection and revision? Does it perpetuate a culture of instant gratification that seems to be intensifying as we become deeper entrenched in this technology society? And it’s not just Animoto, I have encountered this with many new digital tools, but I am using Animoto to reflect as it is exemplary of my concern. I do recognize that it is a great program for instantly creating video and it would be useful as a supplementary tool, however, I am wary of the less tech savvy teachers allowing students to use this tool for larger projects, risking a reduction in thought on the part of the student. The teacher may be dazzled by the bells and whistles of the final product without realizing that the process was devoid of high order thinking, analysis, reflection and revision. Ultimately, it comes down to knowing when it is developmentally or situationally appropriate to use the simpler tools.

Symbaloo is an example of a simple cool tool that I would be excited to implement in my classroom as it is it’s simplicity that can facilitate higher order thinking. Symbaloo is an online curation tool that visually categorizes and organizes information in one central location, called a webmix, using colour-coded tiles. I will definitely use Symbaloo to have students research, organize and share information. Specifically, I envision students first using diigo.com to highlight and annotate websites and then using Symbaloo to organize their research systematically and share it with their peers. It could also be used in a jigsaw activity where students research parts of a topic individually and then share their information in a central location. Furthermore, for students who may be easily overwhelmed by a lot of information, the fact that *one* tile will only link directly to *one* source is helpful. These students may otherwise feel anxious by the inherently open nature of the internet and its resources. Without the executive functioning or online reading skills required to sift through many sources and choose the most appropriate, searching on the internet for information can be a challenge. Other users may see the one-tile-for-one-link set-up as a limitation of the interface, however, this can be hacked. It is possible to set up a webmix where each tile is linked, not directly to a source, but rather to another webmix containing a variety of tiles and links for that one topic.

Celly is a texting interface/platform that can be accessed in a web-browser, through the Celly app (which is compatible with iPhones, iPads and Android devices) or through the text messaging function of any phone (Smart or otherwise). Due to the character restrictions, Celly is like texting or tweeting, without the privacy issues. Students don’t need to enter personal information or share phone numbers between each other or with the teacher. The teacher can also control or curate what is posted on the public feed and address any inappropriate behaviour should it arise. I can see myself using Celly as an exit strategy. I would have students send a ‘text’ in response to a question posed at the end of class. In addition to the texting, I also liked Celly’s polling feature. The teacher, or other students, can post a question in the form of a poll in order to generate data. Importantly, the polls can be used in place of hand-raising for a teacher to anonymously collect info about consensus. Celly could also be used to teach students how to be concise in their writing as there is a character limitation, like with Twitter. Students could create and share short writing assignments like six-word memoirs and sentence-long summaries to demonstrate their ability to summarize and synthesize information. One potential concern of using Celly is that it may perpetuate students’ inappropriate use of informal writing conventions. It would therefore be necessary to expressly teach students when and where it is appropriate to use informal and formal writing.

Infogr.am is an online web tool used to generate charts, graphs and infographics in an appealing, engaging and creative way. However, in addition to generating infographics, the tool can also be used to deconstruct how information is represented or presented in the media and where it can be misleading when information is presented this way. The program is relatively easy to use, however, requires some direction on the part of the teacher regarding how to input data properly. I can definitely see myself using this program in my classroom, especially when presenting information that may be difficult to understand. Having a visual representation of a concept or data may reach a wider variety of learning styles. The other great part about infogr.am is that it can be used in various subject areas to represent different types of data. In science classes, it could be used to represent data from experiments, but it could also be used in English classes to chart trends in texts – from a fictional character’s development to the different manipulation tools used by the news media. Infogr.am is an interesting and engaging way to explore subject content.

Finally, Storybird is an online story-making tool that allows students to combine free-use images with text to create a digital storybook. Storybird is extremely easy to use and has a visually appealing site layout and design, image and colours bank. I envision using Storybird as an introduction to creating digital stories as it requires little to no instruction. Storybird could also be used to help students synthesize information in a creative way. For example, after learning about a politically complex period of history, students could create a digital story to represent what they learned. Having students create a narrative using a digital tool could increase engagement, active learning and synthesis. One constraint of Storybird is the limited choice the user has in terms of design layout. As a result, if using Storybird in an assignment I would place assessment emphasis on the content of the book, rather than on the design elements.

**Cool Tools Application Plan**

*Tools:* GoodNotes, mindmeister, iMovie, Storify, Ning, Symbaloo.com, diigo.com &

Screencast-o-matic.com and Popcornmaker

*Context:* Grade 9 Canadian history class (ages 14-15) in Ottawa, Canada. School must

have access to iPads, GoodNotes and iMovie apps and the internet.

*Task/Scenario:* To learn about the history of Canada from Confederation in 1867 to

present day through experiential and active learning.

*Content:* First, students are set up with a Ning account, in a closed group, in order to

share information and knowledge with their peers.

Students visit the Canadian Museum of Civilization in Ottawa, Ontario to

learn about the history of Canada, it’s people and culture.

Students are given the following question/task card: *Canada: Whose history? Use your time at the Canadian Museum of Civilization and your online reading and research skills to learn about the history of Canada from one of the following three perspectives: First Nations, women or Francophone.*

Students use the GoodNotes app to collect information about Canada through the photo and writing functions as they tour the museum.

Back in the classroom, students use their online reading and research skills from a previous unit to supplement, compare and contrast the information they collected at the museum.

To help students organize and share their information, they must use [www.diigo.com](http://www.diigo.com) and [www.symbaloo.com](http://www.symbaloo.com). [www.diigo.com](http://www.diigo.com) allows students to highlight and annotate information on a web page and [www.symbaloo.com](http://www.symbaloo.com) allows students to curate and organize websites into thematic groups, which can be shared. Students can use the following tutorials to assist them in their learning: Symbaloo: <http://www.youtube.com/watch?v=tZYMXxw5zl0> and diigo: <http://www.youtube.com/watch?feature=player_embedded&v=8K8vM3OSluU>

Students then use mindmeister to organize their information into themes (different time periods, different historical perspectives and/or major events and use the linking function to demonstrate connections or trends).

To help them use the mindmeister tool, students may use the following tutorial: <http://vimeo.com/7326217> Students who still require help are encouraged to use the Ning to post technology or content related questions in a discussion forum in order to share and generate knowledge.

With a partner, students then have the choice to create either an iMovie or Storify feed to represent one historical perspective in-depth as a way to demonstrate analysis and synthesis of material. Students are encouraged to use a variety of media to make the end product engaging and dynamic.

iMovie tutorial: <http://www.youtube.com/watch?v=J79_0h3ozS0>

Storify tutorial: <http://storify.com/tour>

iMovies and Storify feeds are then to be shared both on the Ning and in class in a gallery walk.

As a consolidation activity, the students discuss the variety of perspectives and information presented during the gallery walk – what was new, what was interesting, what was unexpected? Students are also asked to comment on how they now view history and the single narrative that is often presented in formal education or in textbooks? What are the affordances and constraints of both?

Assessment of the final product comes from one peer group (accouting for 30% of the student’s final mark) and from the teacher (accounting for 70% of the student’s final mark). Peer-assessment is provided through Mozilla’s Popcorn Maker tool if the product is an iMovie or through [www.screencast-o-matic.com](http://www.screencast-o-matic.com) if the final product was created using Storify. Students must provide specific and constructive feedback to their peers, using academic language and referencing details that were exceptional or required further attention. Popcorn maker allows comments to pop up during a video and screencast-o-matic allows one’s desktop and oral commentary to be recorded. Participation marks are provided for students who participate in the peer assessment. The teacher assessment will come in the same form, with an additional evaluation rubric – see below.

*Pedagogy:* experiential learning; kinesthetic learning; active learning; constructivist

learning; discovery learning; problem-based learning; inquiry-based learning; peer-teaching; collaboration; blended learning

*Assessment:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Level 4 (80-100)** | **Level 3 (70-79)** | **Level 2 (60-69)** | **Level 1 (50-59)** |
| **Thinking:**  -Ability to research, question and reflect upon the information | Presented a wide variety of evidence and research to support one of three historical perspectives | Presented a considerable amount of evidence & research | Lacked a variety of evidence & research | Included little to no historical evidence & research |
| **Application:**  -iMovie & Storify functions | Highly effective use of the iMovie or Storify functions to successfully communicate an historical perspective | Effective use of the iMovie or Storify functions to successfully communicate an historical perspective | Satisfactory to weak use of the iMovie or Storify functions to communicate an historical perspective | Poor use of the iMovie or Storify functions to communicate an historical perspective |
| **Communication:**  -Creativity, engages the audience  -Perspective  -Organization | Begins with a clear intro & sets the historical scene  Historical perspective & why it’s important is present and clear  Ends with a clear & effective conclusion, summing up the evidence | Begins with an intro that sets the historical scene  Historical perspective is mostly present & clear  Ends with a mostly effective conclusion, summing up the evidence | Begins with an intro that attempts to set the historical scene  Historical perspective is convoluted or unclear  Attempts a conclusion, summing up the evidence | Begins with an intro that does not set the historical scene  Historical perspective is unclear  Ending is ineffective, incomplete and does not sum up the main evidence |
| **Knowledge:**  Knowledge & understanding of history | Clearly portrays Canada’s history & major events through one perspective | Portrays Canada’s history & major events through one perspective | Attempts to portray Canada’s history & major events through one perspective | Does not portray Canada’s history & major events and/or does not do it through one perspective |